Regency® COMMUNICATIONS INC.

SERVICE MANUAL

VHF PRESELECTOR
UHF PRESELECTOR

MODEL MA-305

1227 S. PATRICK DR.
SATELLITE BEACH FLA.

0300-4091-400

PRINTED IN U.S.A.
9/80

SERVICE INSTRUCTIONS

REGENCY MA-305

PRESELECTORS

A. GENERAL DESCRIPTION

The MA-305 is a helical preselector kit that is used with MICRO-COM H40 models to improve receiver desensitization 15dB, and MICRO-COM U30 models to improve receiver spurious 10dB.

B. CIRCUIT DESCRIPTION (Refer to schematic)

The circuit consists of a pair of helical resonators that are inserted in the receiver front end. The helicals are tuned for best sensitivity. The normal tune-up procedure may then be followed for the remainder of the receiver.

C. INSTALLATION (Refer to schematic, radio P.C. Board diagrams and helical diagram)

MICRO-COM H40

Remove tie wrap from the cable harness between option slot #2 and receiver oscillator. Locate MA-305 as shown in the component side P.C. Board diagram inserting the coax in the proper holes. Mount the board with the #2 screws provided. Solder and dress the coax as indicated on the solder side P.C. Board diagram (be sure to desolder and cut plating as indicated).

MICRO-COM U30

Locate and drill 1/8" diameter holes on circuit side of P.C. Board per bottom side board diagram. Locate MA-305 as shown in the component side P.C. Board diagram inserting the coax in the indicated holes. Mount the board with the #2 screws provided. Remove coax JU211 from the PA Deck. Solder and dress the coax JU1801 and JU1802 and main P.C. Boards as indicated on the solder side P.C. Board diagram and PA Board diagram (be sure to desolder as indicated). On later 704-064 P.C. Boards some trimming of the MA-305 will be necessary to clear components on the P.C. Board.

MICRO-COM U10R

Locate and drill two 1/8" diameter holes per the chassis detail, page 4-C. Completely remove the coax attached to the receiver RF connector and the receiver input to the receiver P.C. Board. Remove the perforated bottom shield and leave the shield in place. Locate the MA-305 mounting screws in position and dress the coax through the holes in the perforated shield, page 4-D, and solder the shorter coax to the receiver input circuit on the printed circuit board. Solder the longer coax cable to the RF connector. Be sure the shields are soldered to ground and the center conductor soldered to the signal inputs. Finally, mount the shield with its screws and then mount the MA-305.

D. ADJUSTMENT PROCEDURE

Tune the helical preselector for best quieting in conjunction with the radio tune-up procedure to align the radio.

E. SPECIFICATIONS

1. Filter Performance

Insertion loss: 3dB (typical), 6dB (max) in five bands -

Band A	132-148 MHz
Band B	148-162 MHz
Band C	162-174 MHz
Band D	450-476 MHz
Band E	470-512 MHz

Operating bandwidth: ±.75 MHz from center frequency

Skirt Attenuation: Greater than -30dB @ +5 MHz

2. Micro-Com Radio Performance

MICRO-COM H40

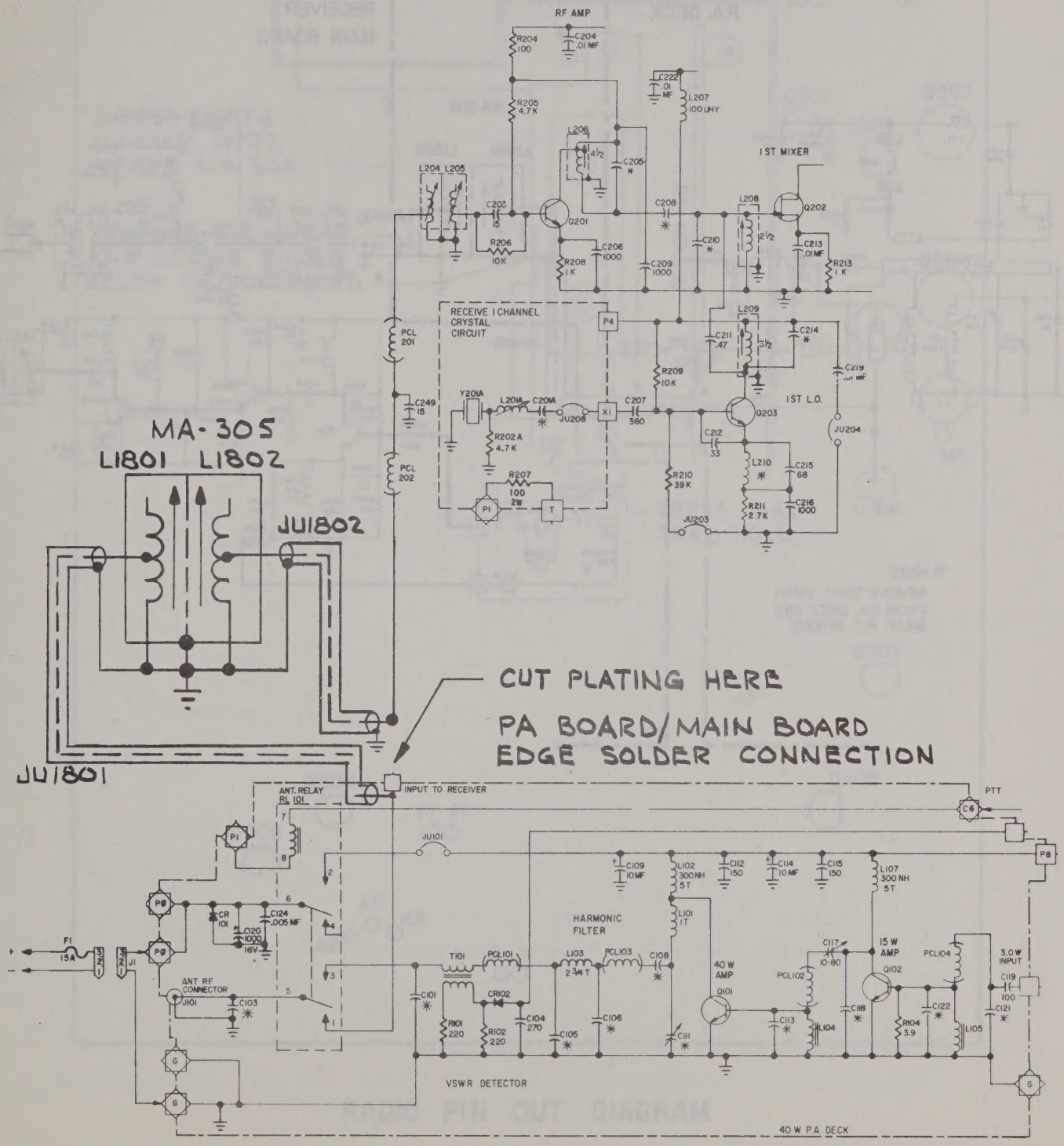
Receiver sensitivity	20dB quieting	1.0μv (max)
	12dB sinad .45μv (typ)	.7μv (max)
Adj channel desense (12dB)	93dB (typ)	90dB (min)

MICRO COM U30 & U10R

Receiver sensitivity	20dB quieting	1.0μv (max)
	12dB sinad .45μv (typ)	.7μv (max)

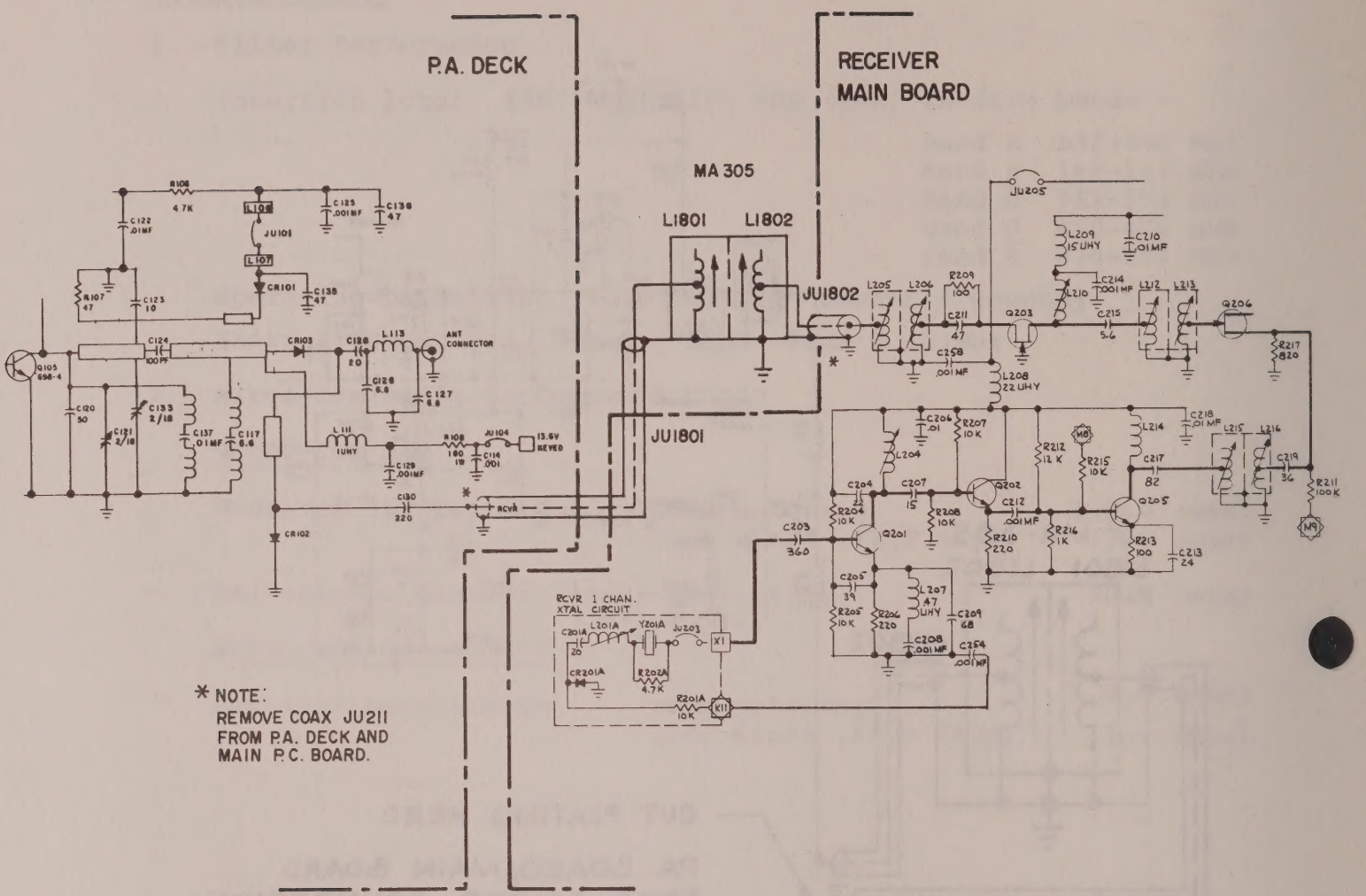
SCHEMATIC

MICRO-COM H40 SERIES



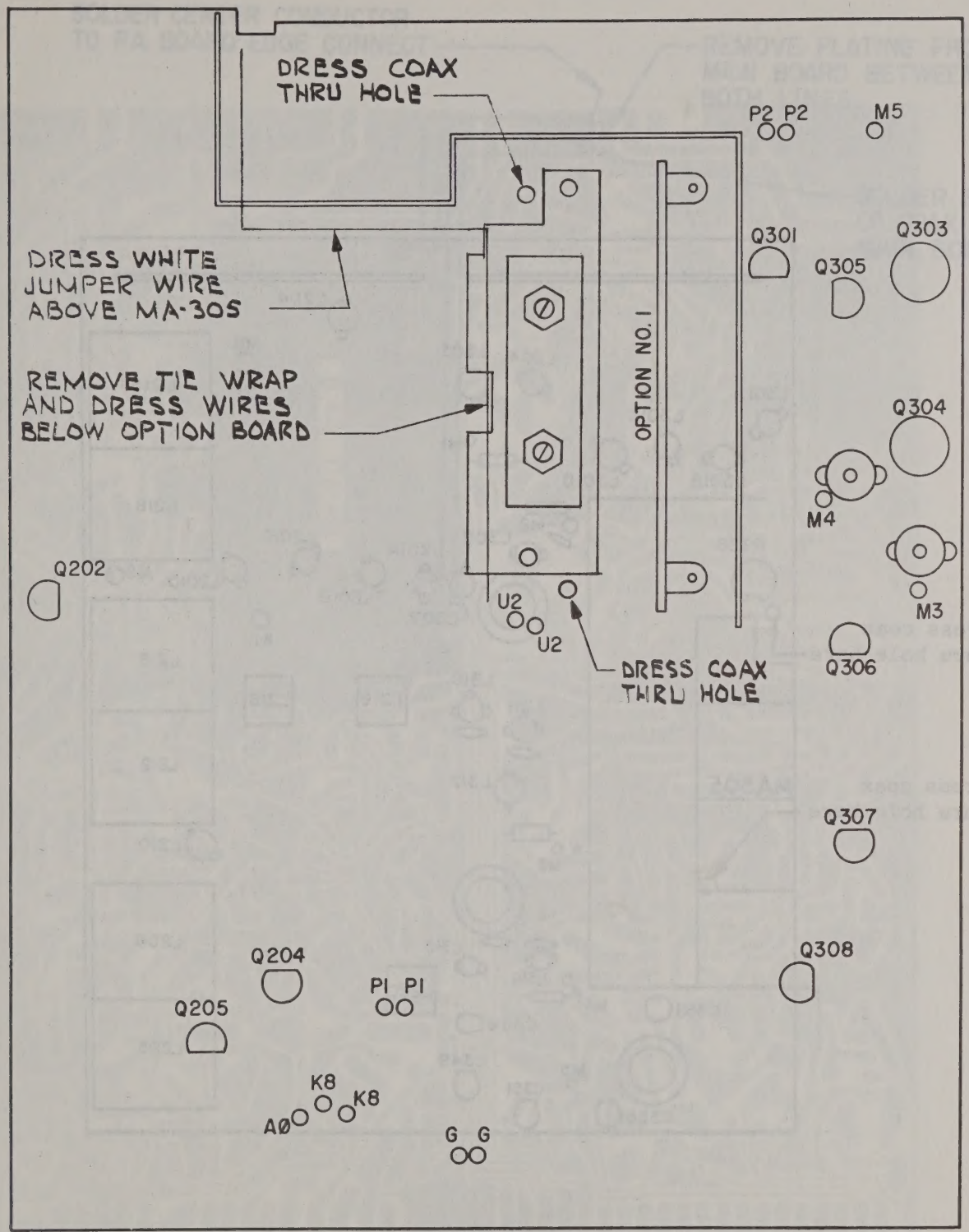
SCHEMATIC

MCU 30



RADIO INTERFACE DIAGRAM

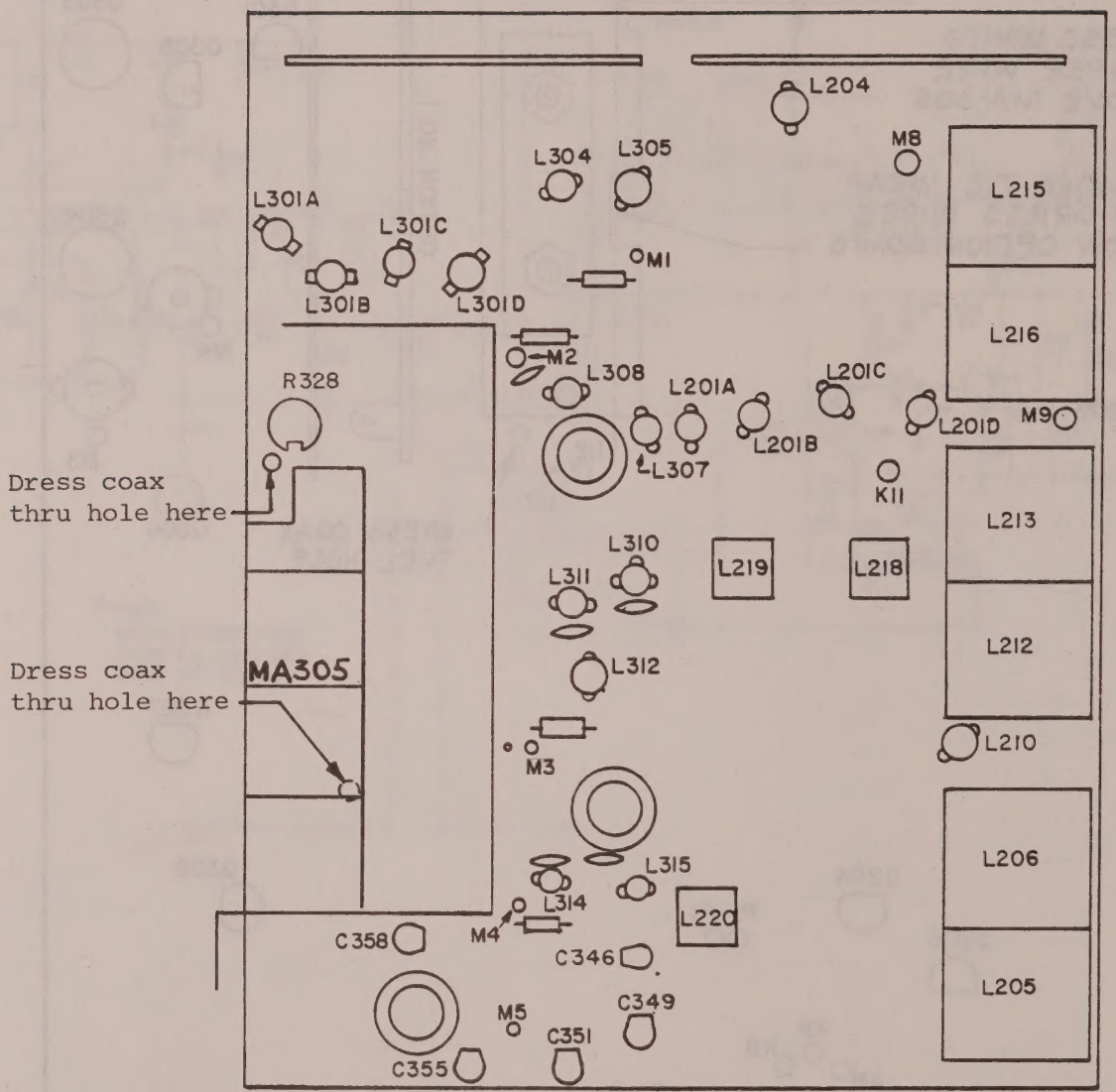
MCH 40



RADIO PIN OUT DIAGRAM

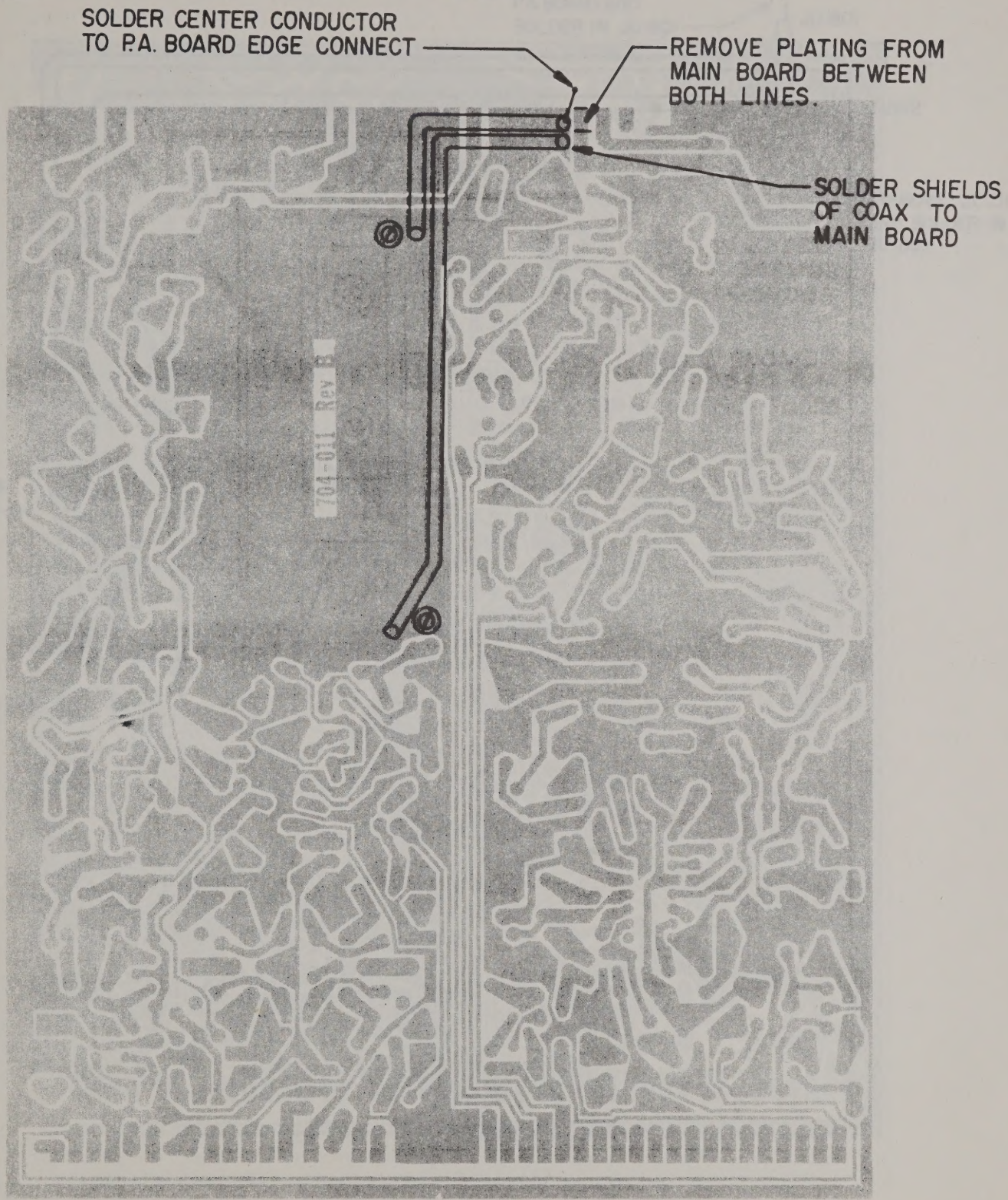
RADIO INTERFACE DIAGRAM

MCU - 30



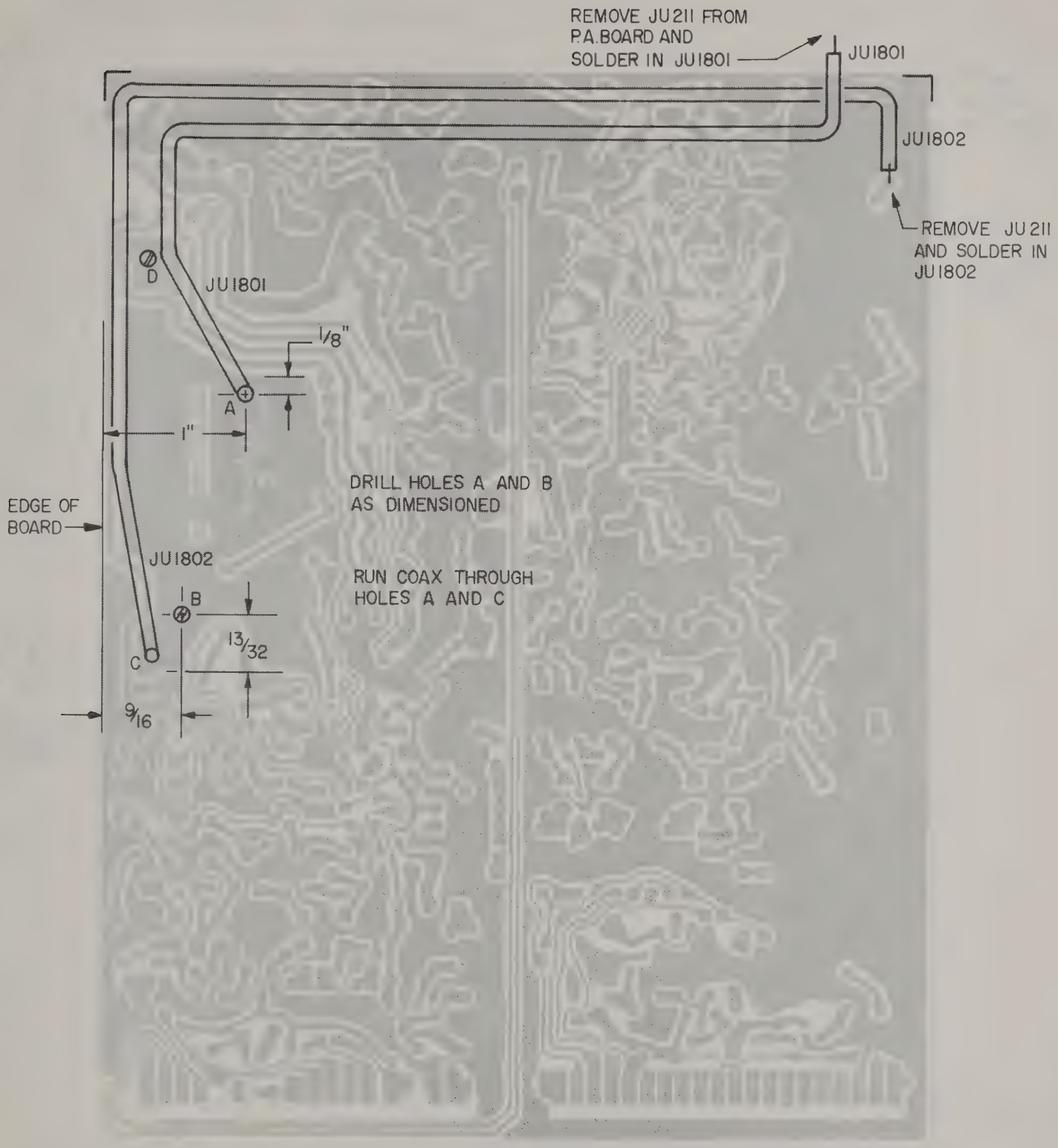
CONNECTION DIAGRAM

MCH 40 704-011 and 704-051 P.C. Boards



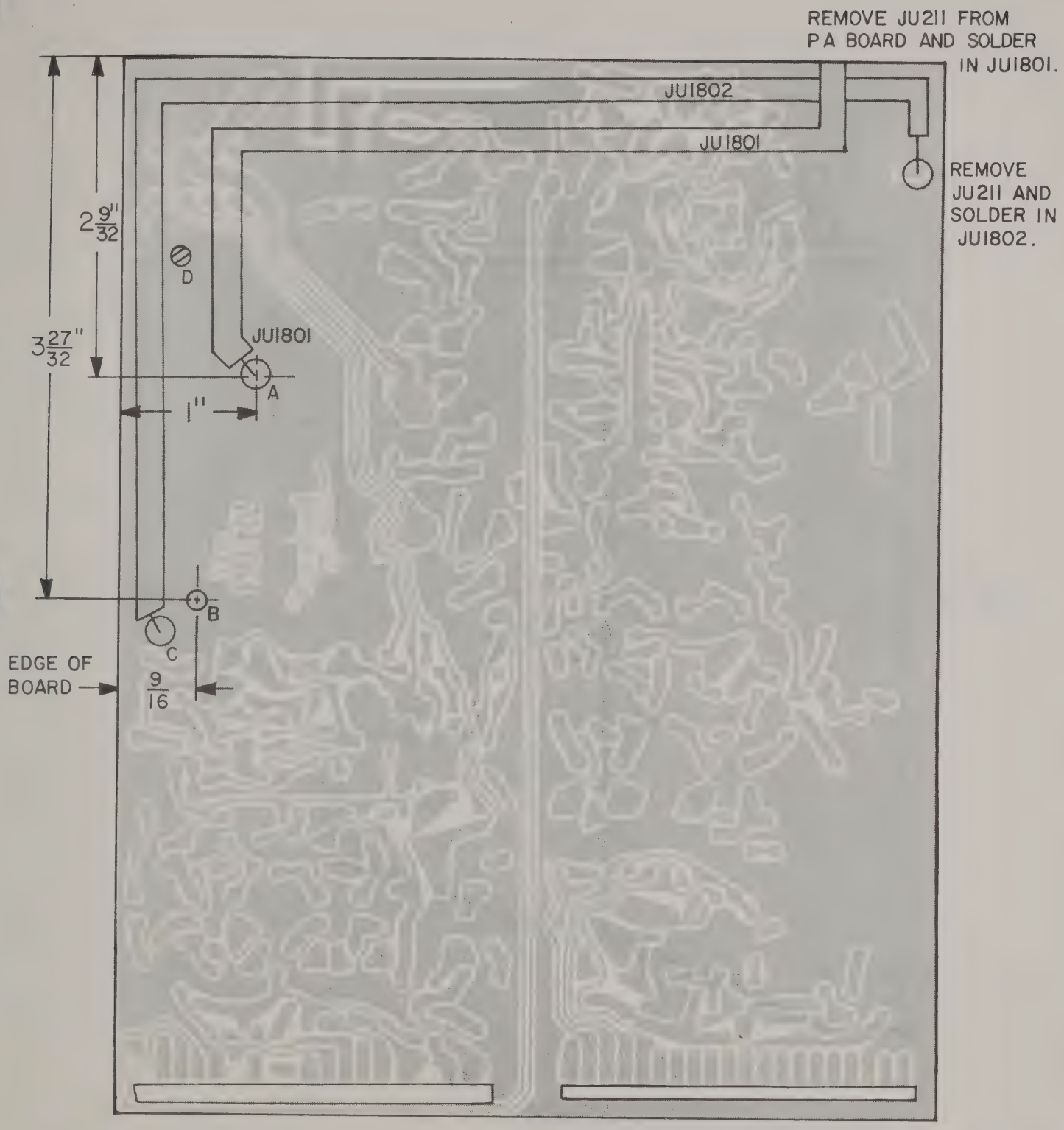
CONNECTION DIAGRAM

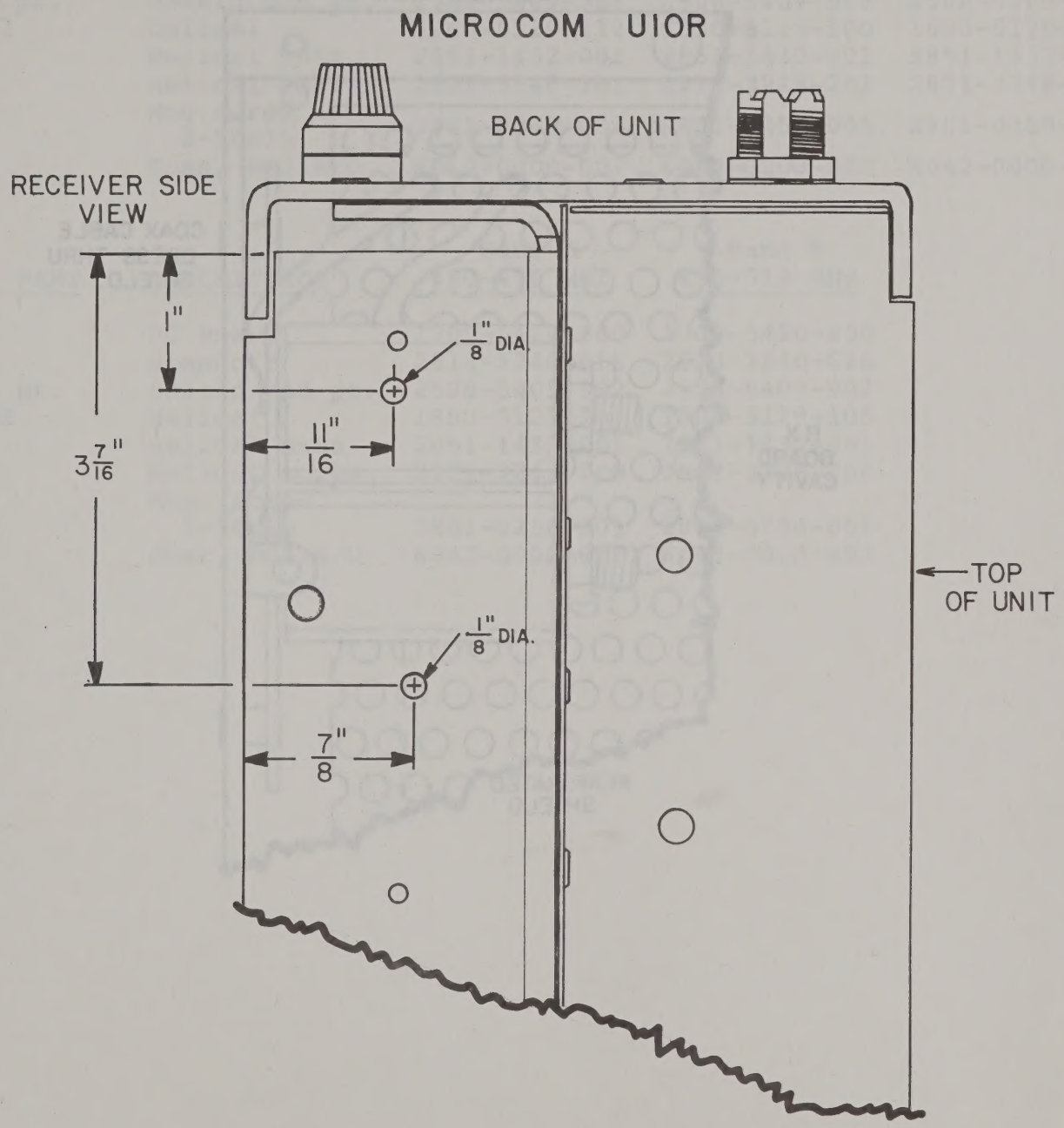
MCU-30 1700-7404-200

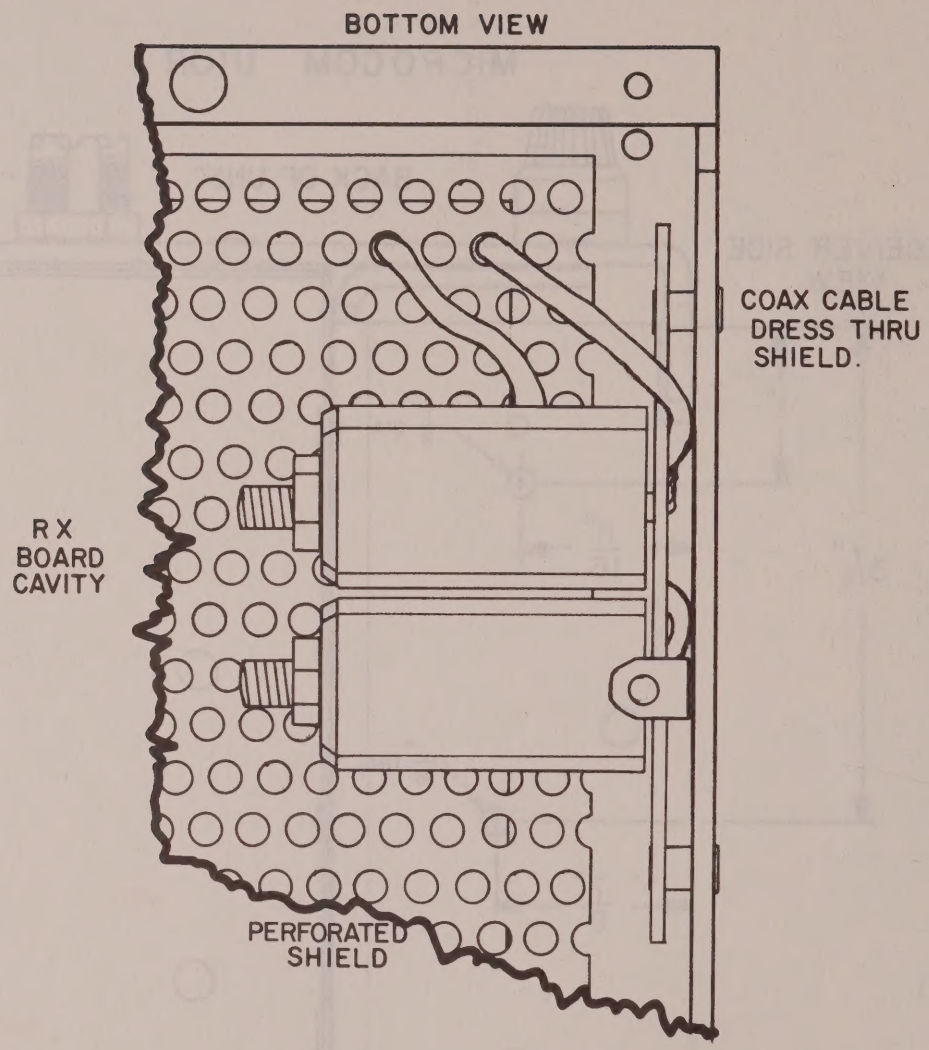


CONNECTION DIAGRAM

MCU30II 704-064G MAIN BOARD




MICROCOM UIOR
BACK OF UNIT
RECEIVER SIDE VIEW
1"
1/8" DIA.
11/16"
3 7/16"
1/8" DIA.
7/8"
TOP OF UNIT


BOTTOM VIEW
COAX CABLE
DRESS THRU
SHIELD.
RX
BOARD
CAVITY
PERFORATED
SHIELD

I. PARTS LIST

MECHANICAL PART	DESCRIPTION	PART NO. Band A 132-148 MHz	Band B 148-162 MHz	Band C 162-174 MHz
PC Board	PC Board	1700-5420-800	1700-5420-800	1700-5420-800
Standoff	Standoff	2813-1240-616	2813-1240-616	2813-1240-616
Shield can pr.	Shield can pr.	2508-5409-904	2508-5409-903	2508-5409-903
L1801, 1802	Helical	1800-5129-112	1800-5129-100	1800-5129-111
Nuts	Helical nuts	2851-1432-001	2851-1432-001	2851-1432-001
Screw	Helical screw	2821-3248-201	2821-3248-201	2821-3248-201
Screw	Mtg screw 2-56x1¼	2801-0250-001	2801-0250-001	2801-0250-001
Coax	Coax, RG316/U	6042-0000-007	6042-0000-007	6042-0000-007

MECHANICAL PART	DESCRIPTION	Band D 450-476 MHz	Band E 470-512 MHz
PC Board	PC Board	1700-5420-800	1700-5420-800
Standoff	Standoff	2813-1240-616	2813-1240-616
Shield can pr.	Shield can pr.	2508-5409-902	2508-5409-902
L1801, 1802	Helical	1800-5129-101	1800-5129-105
Nuts	Helical nuts	2851-1432-001	2851-1432-001
Screw	Helical screw	2821-3248-200	2821-3248-200
Screw	Mtg. screw 2-56x1¼	2801-0250-001	2801-0250-001
Coax	Coax, RG316/U	6042-0000-007	6042-0000-007